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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Yang Li

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EXAMINER

JACOB, AJITH

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,825	Applicant(s) LI, YANG	
	Examiner AJITH JACOB	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al. (WO 02/10980 A1).

For claim 1, Lin et al. teaches:

A method of searching through a plurality of stored documents, the method comprising:
storing the plurality of documents [storing of collection of documents, page 1, lines 8-12];
storing a representation of an ontology, the ontology comprising a plurality of inter-related nodes and being divided into at least two distinct sub-spaces [ontological parser, page 28, lines 9-19];
for each of the plurality of documents, storing at least one association with a node of a first distinct sub-space of the ontology and at least one association with a node of a second distinct sub-space of the ontology [formulation of nodes and associations based on relations, page 28, lines 9-19];

controlling a user interface to permit a user to input up to at least two search terms using free text entry and to permit the user to associate each search term with a respective distinct sub-space of the ontology [user query interface and matching, page 43, lines 4-15];

comparing the or each input search term with nodes of the corresponding sub- space only, in order to attempt to determine one or more possible matches or partial matches [comparing and matching search terms, page 35, lines 12-15]; and

selecting one or more of the stored documents based on each possibly matched or partially matched node and the stored associations between the stored documents and the nodes of the ontology for presentation to the user [present user with one or more matches, page 29, lines 27-30 – page 30, lines 1-3].

For claim 2, Lin et al. teaches:

A method of storing a plurality of electronic documents, said method comprising: generating in respect of each electronic document at least one association with a node of a first type of node and at least one association with a node of a second type of node, the nodes belonging to a predetermined ontology which has the property that a sub-tree of a node of a given type contains only nodes of that same given type [matching nodes to predetermined ontology, page 29, lines 7-26]; and storing the pair or group of associations generated in respect of a particular document in addition to the document in a digital memory in such a way that the associations can be readily linked to the corresponding document [vector patterns mapped to group associated predicates and matches mapped together, page 29, lines 7-26].

For claim 3, Lin et al. teaches:

A method as claimed in claim 1 wherein the first sub-space contains verb nodes or the first type of node is a verb node and the second sub-space contains noun nodes or the second type of node is a noun node [first type node is a verb while second type node is a noun, page 35, lines 1-4].

For claim 4, Lin et al. teaches:

A method as claimed in claim 1, wherein the associations are stored in an index for efficient searching together with an identification of the document to which each pair or group of associations relates [predicates stored in index for easier searching, page 31, lines 16-22].

For claim 5, Lin et al. teaches:

A method as claimed in claim 1 wherein the documents include a natural language description of a service [natural language descriptions in documents, page 14, lines 24-28].

For claim 6, Lin et al. teaches:

A method as claimed in claim 1 further comprising generating a relationship identifier identifying one of a finite number of distinct possible relationships between a node within the first sub-space or of the first type and a node of the second sub-space or of the second type and storing said relationship identifier together with the pair or group of associations [vector patterns mapped to group associated predicates, page 29, lines 7-26].

For claim 7, Lin et al. teaches:

A method of retrieving one or more electronic documents from an electronic storage means storing a plurality of electronic documents, the documents having been stored in accordance with the method of claim 2, the retrieval method comprising: receiving an electronic signal representative of a search request including at least a first term associated with a first type of node and at least a second term associated with a second type of node of a predetermined ontology [user request with multiple terms, page 34, line 30 – page 35, lines 1-10]; comparing the first term with a plurality of nodes of said first type and comparing the second term with a plurality of nodes of said second type and, in the event of determining at least a partial match, attributing a degree of match to each such node [matching of nodes, page 35, lines 1-4]; generating at least one translated search request comprising at least one of said matched nodes of said first type, at least one of said matched nodes of said second type and the degree of match associated with each [translation of request, page 35, lines 1-10]; comparing each matched node of each translated search request with the corresponding node of the same type identified by the stored pair or group of associations corresponding to each of the stored electronic documents [matching predicates with ontological parser to match result, page 35, lines 12-15]; selecting documents for retrieval on the basis of the result of the comparison between the translated search request or requests and the stored pair or group of associations

[selection based on translation, page 35, lines 12-15]; and
outputting an electronic signal representative of, or identifying, the or each selected
electronic document [output selection, page, 35, lines 12-15].

For claim 8, Lin et al. teaches:

A method of generating a search request for use in the method of claim 7, the
search request generating method comprising:

controlling a user interface to request from a user a first term; controlling the user
interface to request from the user a second term [query entry on user interface end,
page 14, lines 10-15];

controlling the user interface to request the user to choose one of a plurality of possible
relationship types to express the relationship between the first and second terms
[multiple input queries to refine search page 13, lines 28-31 – page 14, lines 1-9]; and
generating a search request based on the information entered by the user [connection
to the system for query, page 14, lines 10-15].

For claim 9, Lin et al. teaches:

Apparatus for storing and retrieving electronic documents comprising a computer
system which includes:

an electronic data store comprising means for storing a plurality of electronic
documents;

further electronic data storage means for storing a pair or group of associations
associating each electronic document with at least one node of a first type and at least
one node of a second type of a predetermined ontology [stored document data and

ontology data, page 17, lines 3-24];

request generation means for generating a search request comprising a first term and a second term [user query interface and matching, page 43, lines 4-15];

translation means for generating a translated search request or requests by comparing the first term of a search request with nodes of the first type and comparing the second term of the search request with nodes of the second type to find specific nodes which correspond to the terms of the search request [comparing and matching search terms, page 35, lines 12-15]; and

comparison means for comparing the or each translated search request with each stored pair or group of associations and selecting those documents for which a sufficiently close match is determined [present user with one or more matches, page 29, lines 27-30 – page 30, lines 1-3].

For claim 10, Lin et al. teaches:

Apparatus according to claim 9 wherein the electronic data store also comprises the further electronic data storage means [data store is a storage mean, page 17, lines 3-24].

For claim 11, Lin et al. teaches:

An electronic data store for use in the method of claim 8, the data store storing a plurality of electronic documents and a pair or group of associations associating each electronic document with at least one node of a first type and at least one node of a second type of a predetermined ontology means [ontology data storage, page 17, lines 3-24].

Claim 12 is a computer program of the method described by claim 1. Lin et al. teaches the limitations of claim 1 for the reasons stated above.

Response to Arguments

3. Applicant's arguments filed December 31, 2007 have been fully considered but they are not persuasive. The examiner respectfully traverses applicant's argument.

The 35 U.S.C. 101 rejections have been overcome by amendments and cancellations made to the claims.

Applicant argues that Lin et al. (WO 02/10980 A1) does not disclose a function permit by user to associate each search with a respective sub-space of an ontology as stated in claim 1 of the instant application. Reference clearly teaches a user editor to control values in a query [page 39, lines 5-12]. For claim 1, applicant also states that reference does not teach searching individually to try to find matches, then finding a best overall match. Lin et al. clearly teaches this feature of full and partial matches [page 35, lines 12-15] and claim 1 of instant application does not require a particular order of results, and thus does not need to be taught by reference.

For claim 2, applicant argues that reference does not disclose requiring generating for each electronic document at least one association with each of first and second types of nodes, the nodes belonging to a predetermined ontology which has the property that a sub-tree of a node of a given type contains only nodes of that same given type. Nor does Lin teach storing the pair or group of such associations so generated for a particular document in addition to the document in a digital memory such that the associations can be readily linked to the corresponding document. Lin et

al. clearly teaches collection of predicates based on similar patterns [page 29, lines 7-12] and ontology learned from documents and stored in a data repository [page 29, lines 7-26 and Figure 12].

For claim 9, applicant argues that cited passage does not teach the stored ontological data to comprise a pair or group of associations associating each electronic document with at least one node of a first type and at least one node of a second type of a predetermined ontology. Reference clearly teaches training data with association to document stored with matching document predicates ontology [page 17, lines 3-24 and Figure 12]. For claim 9, applicant also explains that reference does not teach the translation means. Translation means as described by applicant and the reference similarly teaches comparison of similar types and this means taught in reference serves the same function [page 35, lines 12-15].

In light of the forgoing arguments, the 35 U.S.C. 102 rejections are hereby sustained.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ajith Jacob whose telephone number is 571-270-1763. The examiner can normally be reached on M-F 7:30-5:00 EST, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ali can be reached on 571-272-4105. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

4/24/2008

AJ
Patent Examiner

/K. B. P./

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Supervisory Patent Examiner, Art Unit 2161